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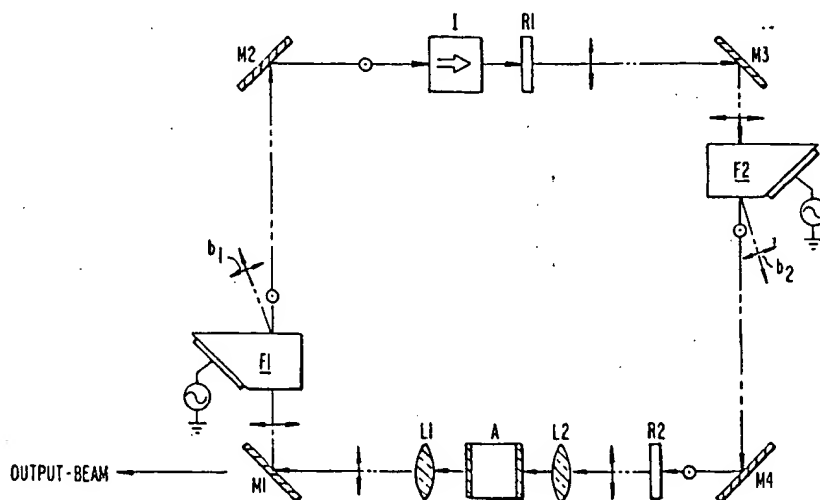
0 524 382 A3

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **92107422.5**(51) Int. Cl.⁵: **H01S 3/106, H01S 3/083,
H01S 3/1055, H04B 10/02**(22) Date of filing: **30.04.92**(30) Priority: **22.07.91 US 733552**(43) Date of publication of application:
27.01.93 Bulletin 93/04(84) Designated Contracting States:
DE FR GB(88) Date of deferred publication of the search report:
24.02.93 Bulletin 93/08(71) Applicant: **Hewlett-Packard Company**
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Mountain View, California 94043(US)(74) Representative: **Schoppe, Fritz, Dipl.-Ing.**
Seitnerstrasse 42
W-8023 Pullach bei München (DE)(54) **Optical oscillator sweeper.**

(57) An electrically tunable optical oscillator. An acoustooptically tunable filter (F1) is located in a feedback path of an optical oscillator. The filter non-collinearly diffracts the light signal to selectively tune the oscillator. In accordance with one aspect of the

invention, the feedback path includes an optical isolator (I) so that light can rotate through the feedback path in only one direction, and a plurality of 1/2 wave retardation plates (R1,R2) for shifting the polarization of the light signal.

**FIG. 4.****EP 0 524 382 A3**



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EUROPEAN SEARCH REPORT

Application Number

EP 92 10 7422

Page 1

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	GB-A-2 118 768 (CHEVRON RESEARCH COMPANY) * page 5, line 43 - page 7, line 39; figure 6 * ---	1,5,6	H01S3/106 H01S3/083 H01S3/1055 H04B10/02
A	PHOTONIC SWITCHING II, PROCEEDINGS OF THE INTERNATIONAL TOPICAL MEETING, 12-14 APRIL, 1990, KOBE, JAPAN pages 241 - 244 S. OSHIBA ET AL. 'Tunable fiber ring lasers with an electrically accessible acousto-optic filter' * the whole document * ---	1,2,5,6	
D,A	APPLIED PHYSICS LETTERS. vol. 53, no. 9, 29 August 1988, NEW YORK US pages 734 - 736 F.V.KOWALSKI ET AL. 'Optical pulse generation with a frequency shifted feedback laser' * the whole document * ---	1,5,6	
D,A	IEEE JOURNAL OF QUANTUM ELECTRONICS. vol. 25, no. 6, June 1989, NEW YORK US pages 1575 - 1579 GERALD COQUIN ET AL. 'Single- and multiple-wavelength operation of acoustooptically tuned semiconductor lasers at 1.3.mum' * the whole document * ---	1-3,5,6	TECHNICAL FIELDS SEARCHED (Int. Cl.5) H01S
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-/--			
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18 DECEMBER 1992	Examiner GNUGESSER H.M.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 92 10 7422
Page 2

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D,P, A	* page 5, line 45 - page 8, line 46; figures 3C,4 *	5	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18 DECEMBER 1992	Examiner GNUGESSER H.M.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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